

Claims

1. Spring suspension mat (10), more especially for the cushioning of all types of seats, beds or chairs, said spring suspension mat (10) having spring members (12, 15), which are disposed in a first direction adjacent each other substantially parallel to a surface which is useable by a user, with a plurality of spring parts (12a, 15a) which are raised transversely relative to the useable surface and form with the spring members one-piece portions of the spring members (12, 15) and are formed from these latter, wherein the spring parts (12a, 15a)
 - are, nevertheless, where required, deformable individually, independently of each other in a resilient manner also relative to the rest of the spring member,
 - are interconnected via connecting means (13, 14, 16) transversely relative to their first direction substantially parallel to the surface for operative connection,wherein the spring parts (12a, 15a) have at least in places such a small bending radius that the spring parts, when there is a resilient deformation, where necessary, are reducible up to approximately the material strength of the spring parts, then being in the folded-together condition, in a loading direction transversely relative to the useable surface.
2. Spring suspension mat according to claim 1, wherein the mounting height of the spring suspension mat corresponds approximately to the spring travel of the spring parts (12a, 15a).
3. Spring suspension mat according to claim 1, wherein the spring members (12) are interconnected by transverse struts (14) in the form of connecting means.
4. Spring suspension mat according to claim 3, characterized in that, said transverse struts are resilient.

5. Spring suspension mat according to claim 1, wherein the spring suspension mat (10) with spring members (12) and connecting means forms a surface comprising a three-dimensional form.
6. Spring suspension mat according to claim 1, wherein it is disposed on a fixed support (20) corresponding almost to the desired outline of the seat or of the like.
7. Spring suspension mat according to claim 1, wherein the spring parts (12a, 15a) are in the form of a diamond resting on one point, said diamonds being continuously formed from the spring member (12, 15) through at least four, preferably five bending points.
8. Spring suspension mat according to claim 1, wherein the spring members (12), which are disposed substantially parallel to each other, are metal.
9. Spring suspension mat according to claim 8, wherein the spring members are made from spring-steel cross bands or at least include spring-steel cross bands.
10. Spring suspension mat according to claim 1, wherein the spring members are interconnected for operative connection by means of a flat connecting means (13, 16), which is disposed on at least one side of the spring suspension mat (10) and is glued to the spring members (12) or is connected thereto in another manner and is formed by a mesh, a layer, a mat or a film.
11. Spring suspension mat according to claim 1, wherein the spring suspension mat is produced from plastics material by means of injection molding or deep-drawing.
12. Spring suspension mat according to claim 1, wherein the spring suspension mat (10), at least comprising the spring members (12) and the connecting means (13, 14), forms a composite material for use in seats or vehicle seats.

13. Spring suspension mat according to claim 12, wherein the composite material includes further parts of the vehicle seat and/or is an integral component part of the vehicle seat or parts thereof.
14. Spring suspension mat according to claim 1, wherein the spring members (12) and spring parts (12a) are situated so closely adjacent each other that a flat impression is produced through the number of support points.
15. Spring suspension mat according to claim 1, wherein the overall height of the spring suspension mat is between 8 and 20 mm, preferably 10 mm.
16. Vehicle seat with a spring suspension mat according to one of the previous claims.